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Volunteerism in Public Transportation

Financial and Management Aspects

August 1986

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Volunteerism in Public Transportation

Financial and Management Aspects

Final Report
August 1986

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Respondents in Questionnaire

Del Beckman (Faith Countryside Homes); Chris Harshburger and Donna Rhone (Regional Transit Commission); Judy Willis (Cadabout); Susan Sloan (SCAT); Marla Mueller (OATS); Doci Haslam (Voluntary Action Center of Montgomery); Marjorie Gehrke (American Red Cross); Christina Cunningham (Volunteer Center of Napa County); Betsy Smoley (Bethesda Help); Ilene Shaw (County Older Resident Program); David Lowe (Rock County Specialized Transit); Gene Forbes (Volunteer Bureau of Marin County); Amy Walters (Seneca County Office for the Aging); Barb Burkart (MEDVAC Coluntary Action Center); Joe Sonntag (Senior Information & Assistance); Nancy Morneault (Strafford City CAP); Willis Spalding (Eastern Transportation Services); Nancy Harrington (WHCA Transportation); Peggy Williams (Madison City Senior Citizen Transportation); John Delaney (Bolton Council on Aging)

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Theodore O. Wallin
August 15, 1986

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INTRODUCTION AND METHODOLOGY

In 1984-85, Syracuse University and Babson College collaborated on a research project designed to assess the economic contribution of volunteers in rural public transportation programs. First, a sample was drawn of rural communities,[1] and telephone contact made to determine the extent of use of volunteers. Second, researchers chose a judgmental sample of transportation programs known to use volunteers. Systems which draw more than ten percent of their resource base from volunteers were included. Cases were selected based upon (1) systems known to the research group (2) systems which had been described in previous studies and (3) referrals from colleagues who became aware of the study.

The research conducted in this study, took the form of two data collection questionnaires. The first was a short phone questionnaire designed to discern the variety of transit available to nonurban Americans. The second was a mail questionnaire which was used to assemble cost data from existing systems that are presently utilizing volunteers.

Phone Survey

The towns chosen for inclusion in the phone survey came from a random sample of rural towns which was developed at North Carolina A & T for use in previous research. The data base consists of 326 towns, of which 309 responded. Appendix A is a copy of the questionnaire. Trained interviewers spoke with the city manager, or his/her equivalent, in each town. Questions 10-A and 11-A were excluded because few city managers could give accurate or confident responses concerning informal activity among constituents.

Tables A-1, A-2, and A-3 highlight the findings from the survey. As can be seen from the column headings, we tested to see if the service levels or transit mix are influenced by geographic region, transit subsidies within states, or by a town's proximity to an urban area. One figure which is unexpectedly high is the percentage of city managers who reported that human service agencies are providing transportation service in their towns (76.4%). It was known at the outset that the social services were leading the way in providing transit to the disadvantaged in rural areas. There was no way of predicting, however, that their impact would in fact be as pervasive as the results show.

The number of city managers reporting that volunteers are helping to provide transportation in their communities is a misleading indicator of the prevalence of volunteer-based systems. A good number of volunteers are operating in an informal environment in an effort to meet a current perceived need for transportation in their communities. Examples would be church buses for group activities and parents pitching in to transport children to recreational functions. The 43.2% figure is evidence of a willingness to help at a grass roots level. Such a willingness is a vital foundation for the implementation of a volunteer transit program. Indeed, throughout this research effort, the most commonly heard complaint from local areas frustrated in their attempts to start a system, is that their constituents are unwilling to volunteer. The study rests its conclusions on twenty success stories, cases where local agencies were able to get volunteers to supply at least ten percent of the resource requirements to run a rural transportation program.

Table A-1. SURVEY OF NATIONAL SAMPLE OF RURAL COMMUNITIES

- TRANSIT AVAILABILITY BY REGION

Transit Type	Population Total	Northeast	South	Midwest	Rocky/ Pacific
1. Bus (intercity)	66.3%	76.7%	69.1%	56.8%	72.6%
2. Cab	55.3%	68.3%	72.1%	40.7%	53.2%
3. Volunteer	43.2%	40.0%	44.8%	43.2%	44.4%
4. Service Agency	76.4%	80%	83.8%	72.6%	74.2%
5. Church Non-Profit	28.8%	28.3%	29.4%	32.2%	22.2%
6. Formal Car & Van Pooling	30.7%	43.3%	29.4%	25.4%	30.6%
7. Ride Clubs	1.6%	5%	1.5%	0%	1.6%

1985 Data. Syracuse University Project

Table A-2. SURVEY OF NATIONAL SAMPLE OF RURAL COMMUNITIES

- TRANSIT AVAILABILITY BY PROXIMITY TO URBAN AREAS

Transit Type	Population Total	Availability by proximity to Urban Area (Distance from city of 50,000 + in minutes)			
		under 30	30-60	60-90	more than 90
1. Bus (intercity)	66.3%	68%	62.4%	61.5%	75.5%
2. Cab	55.3%	47%	63.2%	53.8%	54.7%
3. Volunteer	43.2%	43%	44.4%	47.4%	37.7%
4. Service Agency	76.4%	74%	72.6%	87.2%	81.1%
5. Church Non-Profit	28.8%	31%	24.8%	33.3%	30.2%
6. Formal Car & Van Pooling	30.7%	31%	34.2%	23.1%	28.3%
7. Ride Clubs	1.6%	2%	.9%	0%	3.8%

Table A-3. SURVEY OF NATIONAL SAMPLE OF RURAL COMMUNITIES

- TRANSIT AVAILABILITY BY STATE SUBSIDY

Transit Type	Population Total	Availability by Subsidy	
		States with subsidy	States without subsidy
1. Bus (intercity)	66.3%	68.4%	63.7%
2. Cab	55.3%	59.2%	50.4%
3. Volunteer	43.2%	44.8%	41%
4. Service Agency	76.4%	71.8%	82.2%
5. Church Non-Profit	28.8%	27%	31.1%
6. Formal Car & Van Pooling	30.7%	32.2%	28.9%
7. Ride Clubs	1.6%	2.3%	.7%

The following criteria were used in choosing systems from which to collect cost data:

1. They should represent various regions of the country.

2. They should vary in the size of their service areas.

3. They should vary in the size of their volunteer components.

4. They should use volunteers to offset at least 10% of costs.

5. We were able to find 20 systems which met these four criteria.

Three approaches were used to find the 20 systems included in the study. The first involved searching literature in the bibliography to find references to systems using volunteers. Most of the systems were found through this method. The second approach consisted of calling individuals working in the field for references to systems familiar to them. The final approach entailed following up on references to volunteer systems which surfaced during the phone survey. Only one of the set came from this final method.

The following is a list of the systems which provided us with cost related data from their operations.

1. Faith Countryside Homes - Highland, Illinois

   Serves: A housing complex for the elderly

   Respondent: Del Beckman

2. Regional Transit Commission - Waterloo, Iowa

   Serves: Several Counties in Northern Iowa

   Respondent: Chris Harshburger, Donna Rhone

3. Gadabout - Ithaca, New York

   Serves: Tompkins County

   Respondent: Judy Willis

4. SCAT - Auburn, New York

   Serves: Cayuga County

   Respondent: Susan Sloan

5. OATS - Columbia, Missouri

   Serves: 88 Counties in Missouri

   Respondent: Marla Mueller

6. Voluntary Action Center of Montgomery, Inc.

   Serves: Montgomery and vicinity

   Respondent: Doci Haslam

7. American Red Cross - Phoenix, Arizona

   Serves: Phoenix and vicinity

   Respondent: Marjorie Gehrke

8. Volunteer Center of Napa County - Napa, California

   Serves: Napa County

   Respondent: Christina Cunningham

9. Bethesda Help - Rockville, Maryland

   Serves: Rockville and vicinity

   Respondent: Betsy Smoley

10. County Older Resident Program - Clayton, Missouri

    Serves: St. Louis County

    Respondent: Ilene Shaw

11. Rock County Specialized Transit - Janesville, Wisconsin

    Serves: Rock County

    Respondent: David Lowe

12. Volunteer Bureau of Marin County - San Rafael, California

    Serves: Marin County

    Respondent: Gene Forbes

13. Seneca County Office for the Aging - Seneca Falls, New York

    Serves: Seneca County

    Respondent: Amy Walters

14. MEDVAC Voluntary Action Center - DeKalb, Illinois

    Serves: DeKalb County

    Respondent: Barb Burkart

15. Senior Information & Assistance - Seattle, Washington

Serves: Seattle and Vicinity

Respondent: Joe Sonntag

16. Strafford City CAP - Rochester, New Hampshire

Serves: Strafford County

Respondent: Nancy Morneault

17. Eastern Transportation Services, Bangor, Maine

Serves: Penobscot County

Respondent: Willis Spalding

18. WHCA Transportation - Milbridge, Maine

Serves: Milbridge and Vicinity

Respondent: Nancy Harrington

19. Madison City Senior Citizen Transportation - Morrisville, New York

Serves: Madison County

Respondent: Peggy Williams

20. Bolton Council on Aging - Bolton, Massachusetts

Serves: Bolton and Vicinity

Respondent: John Delaney

These case studies can be helpful to areas which presently have no service using volunteers, in that most systems will find a study case, or cases, which resembles their own in terms of geographic area, service area and desired volunteer component.

Methodology of Data Collection

With the required data in mind, the questionnaire was developed and mailed to the above list of respondents. Appendix B is a copy of the questionnaire. Upon the return of the questionnaires, follow-up calls were made in order to minimize the level of non-response to specific questions. The area of the questionnaire which presented the most difficulty to respondents dealt with the start-up period. Several of the systems had little or no record of the time and efforts expended in getting started.

Only one system declined to respond after receiving the questionnaire. The contact there felt that their operation was too small to be relevant to our data needs. This system is not one of the twenty listed above. The questionnaire provided by the system in DeKalb, Illinois was of limited use

because MEDVAC is part of a larger operation. Much of the data we needed was not specific to MEDVAC but to the entire organization. By the time we discovered this, it was too late to send a follow-up questionnaire.

The results which are most likely to be questionable in accuracy are those concerning start-up costs. Respondents were asked to estimate these figures if no detailed records were available. The rest of the results should be reasonably accurate because the data could be transferred from normal operating and accounting records.[1]

FINDINGS OF A SURVEY OF THE LITERATURE AND CASE STUDIES

The Characteristics of Agencies

There is a continuum running from the "pure" volunteer system to a "pure" paid staff system, along which all public transportation programs can be placed. Most are mixed models, and this report argues that systems which combine dedicated volunteers and well qualified paid managers can be productive and highly effective.

Most volunteer programs are adjuncts to existing transportation operations, which are run by paid staffs. The complexity of modern transportation management, even for lower density rural areas, suggest the need for a planning and management function which lies beyond the understanding or interest of many volunteers.

One can find, however, some interesting examples of the pure volunteer form. In one such example, an organization such as a Council on Aging takes the initiative to recruit volunteers. The management requirements are minimal because (1) there are few, if any, cash transactions and (2) the volunteers drive their own cars. Trip requests are received by volunteers, sometimes a person working at home, or by the system of rotation in covering an agency's telephone. In the latter case, the times when calls may be taken are usually severly restricted.

Volunteers in the pure volunteer form offer a limited amount of service, constrained by the economics necessities of a cash-less program. From Table 1, one notes the expected pattern: Organization which have the largest numbers of volunteers (for example, over twenty), are organizations with the larger budgets.[2] For example, of the thirteen cases of volunteer systems with more than twenty volunteers, ten spent budgets in excess of $10,000 annually; of these, eight spent an annual budget in excess of $50,000.

---

[1]The sample use was that previously drawn by the Transportation Institute, North Carolina Agricultural and Technical State University, for a survey of transportation conducted in 1976-77.

[2]Numbered tables appear at the end of the report.

Production of service is also tied to numbers of volunteers. Of the thirteen systems with over 20 volunteers, 11 produced over 10,000 annual miles of service. By contrast, none of the systems with less than twenty volunteers were able to do this well. See Table 2.

Characteristics of Transportation Programs
System Characteristics

Table 3 provides an overview of the variety of the transportation systems which have significant volunteer components.

Eligibility for service: Only one quarter of the twenty systems offered service to the general public; the rest set priority rules on service, usually restricting the service to the elderly and handicapped, or even more narrowly to designated agency clients.

Numbers of Vehicles: Sixty percent of the systems had registered to itself more than one vehicle. Although a considerable number of the systems did have volunteers using their own vehicles, the trend seems to be in the direction of using volunteers to drive the agency equipment.

Origin: Slightly more than half (55%) began through the activities of paid staff of an organization, rather than through a volunteer initiative. As will be shown, the complexities of recruiting, training, and financing a volunteer-based program, frequently require professional direction.

Coordination: Of the cases examined, nine, or 45 percent, began with the efforts of a single agency. Thus, more than half resulted from the coordinated initiatives of two or more organizations. Frequently it is found that one agency has skill and reputation in recruiting volunteers; another has vehicles or other element of the transportation system. Combining the organizational efforts of several agencies yields a very productive, cost-effective, coordinated program.

Management: Nearly three-quarters (70%) of the cases used a paid staff person to supervise volunteers. Volunteers frequently are only part of the staff of the agency; paid drivers or paid dispatching staff may also fall under the direction of a paid management.

Turnover: Many human service transportation programs flatly reject the use of volunteers, because the management feels that volunteers are less reliable, more likely to quit or experience other forms of turnover. What are the facts? None of the systems which have volunteers rated the turnover to be high. In fact, forty percent called it "negligible," and another 45 percent evaluated the turnover as "moderate." None felt that turnover of volunteers impeded the operation.

Growth: The majority of systems felt that service would expand by more than ten percent in the next two years. Despite expressed concerns that the growing labor force participation of women might

diminish volunteerism, the agencies generally felt that the immediate future was one of growth.

Characteristics of Transportation Programs

Service Characteristics

Systems vary widely in service levels and restrictions on service. Table 4 presents an overview of patterns:

Common characteristics:

- All systems offered door-to-door pickup.
- Most systems offer general mobility (not restricted to medical trips, for example).
- Most systems offer service only to a group of eligibles (based upon age, physical condition, or other criterion).
- Most systems offer a personal touch: the driver knows the rider's name; there is someone who can help with bags, and so on.
- Most depend upon telephone contact with users for the ordering of service.

Less frequent characteristics:

- Only about half charge for rides (including asking for donations).
- Less than half (forty percent) advertise their program.
- Few systems combine car pooling or van pooling with other paratransit operations.
- Few combine meals-on-wheels with paratransit.
- Few meet all the transportation needs which have been identified among the elderly, disabled, or low income.

The pattern for many of these systems is that of using volunteers as adjuncts to a cash-based system, which derives funding from a variety of public sources. Few programs that offer large amounts of service do so with a purely volunteer system. The level of service offered is quite high: telephone reservations, door-to-door pickups, and broad permission for various trip purposes, rather than targeted medical trips is the norm.

The Implications of Using Volunteers in a Transportation Program

Incentives to Attract Volunteers

The managers of volunteer transportation systems felt that noneconomic factors were the principal motivation for participation. "I cannot stress enough what a thrill it is to be a volunteer," enthusiastically exclaimed one manager. "I have some trouble getting people to try it once, but I never have trouble getting them to do it the second time." Volunteers know they are needed. They can see immediately the benefits of the time they have donated: an elderly person gets a shopping trip; a cancer patient has company for the

trip to get chemotherapy; the M.S. victim gets a lift to (and out of) a peer group session; a child gets a trip to a clinic; a medicaid-eligible person gets much needed medical attention. The list goes on and on.

Table 5 reviews the incentives which program directors felt were operating to attract and retain volunteers. The good feeling associated with having a real opportunity to help was the overwhelming choice. Volunteers enjoy the experience, and know that their services are crucial to the well-being of another person.

Other incentives are less important. The conventional reimbursement rate of $.20 per mile was, in fact, paid only in slightly more than half the cases. Many volunteers did not want to be bothered with the paperwork. Directors listed other incentives, including recreation and social opportunity, publicity and tax write-offs.

Program directors stressed that the training and cultivation of the volunteers is very important. Volunteers must be reminded of both the economic and social value of their contribution. Annual awards dinners, letters of thanks, and other noneconomic rewards were believed to strengthen the commitment of volunteers.

The Role of Volunteers

From Table 6, one notes that many assumed negatives of using volunteers did not prove to be true in these cases. Of the twenty cases, only two felt that service would be more dependable if paid staff performed the function. Only three felt that they could demand more responsibility from paid staff than from volunteers. The majority felt that service would be no more, no less caring if the staff were not volunteers.

Most saw the crucial economic role played by volunteers. Of the twenty systems, sixteen felt that the loss of the volunteer program would spell an end to the agency's transportation program. Nearly half felt that a loss of volunteers would result in at least a twenty-five percent increase in cash cost of the program.

These positive results may be the consequence of natural selection. Systems which have survived for several years using volunteers may have a special secret, a key leader, or other reason why the volunteers seem to play an untroubled role. The author has heard from some advocacy groups that informal volunteer systems are not reliable; friends die or move away; relatives may not live nearby. Perhaps an important difference in the formal volunteer programs is the additional attention to training and deployment of volunteers, and the ability to rotate assignments so that as one leaves another steps in to take the place of an absent, or retired volunteer.

Economic Aspects of Volunteerism

Purely volunteer systems, relying on the contribution of in kind services by friends, neighbors, and other volunteers can continue to function as long as volunteers continue to serve the program. However, many of the large scale programs described in this report have considerable overhead, leading to the need for sustained support at federal, state, or local levels.

Since many of the transportation programs involving volunteers are heavily dependent upon public support, it is interesting to see the diversity in sources of funding for the agencies. All but twenty percent had some degree of federal funding; all but thirty percent derived income from state sources. Only twenty percent operated with no local government funding. Two-thirds of the agencies felt that their funding was assured, at least for the next six months. These figures and others quoted in this section may be found in Table 7.

Only fifteen percent of the systems reported receiving money from the Section 18 program of federal assistance to rural areas. Thirty percent reported support from the 16(b)(2) program. Most have program funding from human service agency budgets (including elder services, mental health, Medicaid, and community block grant funding). These data should be read as perceptions that may or may not be accurate. As George Rucker has previously noted,[1] agencies do not always have an accurate picture of the ultimate source of "state and local monies," since many derive in the first instance from federal sources.

One quarter of the agencies reported having no human service or community organization funding at all. One of the systems had lost a significant funding source in the last year.

By contrast, half of the systems reported having more dollar resources now than two years ago. Sixty percent had more volunteers now than two years ago.

One source of instability in funding is the frequent legislative changes in the diverse human service agency budgets: one year a program will offer operating assistance; the next year the program funds may be withdrawn. Some program budgets which have remained durable and fairly stable funding sources for these systems appear to be:

* Head Start
* Vocational Rehabilitation
* Area Agency on Aging
* Mental Health
* Continuing education programs in Community Colleges

Many of the volunteer-based systems are not aware of the multiple funding sources which their counterpart organizations use. The bibliography contains some useful current references (19,31,56) on finance.

Start-up Costs: the Costs of Planning and Implementation

Most agencies evolved their transportation program over a protracted time period. In the early stages, volunteers may have planned or conceptualized

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[1] George Rucker, et al. "Matching Section 18 Operating Assistance in the South." Paper presented at the 1984 Annual Meetings of the Transportation Research Board.

the general scope of the project. In about half of the cases, however, it was paid staffs who set the wheels in motion. Here are some of the steps through which these agencies typically passed:

Design of plan: One or two key leaders hit upon the idea of creating a transportation program to serve, if not the general public, at least more than one agency's clientele.

Seeking support: These leaders reach out to other agencies or decision-makers, to explore the possibility of getting needed resources, contracts, reimbursements, or other sources of funding. This step takes a lot of time, typically five months or more.

Seeking approvals: With a plan in mind, a lot of contacts are needed with persons or groups who must confer their approvals or authorities.

- Space: Who will house the project? At what cost?
- Dispatching: Who will serve as volunteer to take telephone trip requests? Will they permit the use of their home telephone?
- Planning: Who will register those needing transportation? Who, if anyone, will do a needs assessment?
- Insurance: Who will pay for a policy covering volunteers? Who will issue the policy?
- Bookkeeping and business functions: Who will do the paperwork, and pay any bills?

- Contract negotiation: Who will negotiate contracts for service? Under what terms?

Frequently, agencies will pay a transportation provider a flat cents per mile rate. Thus, a volunteer system can get funding to reimburse volunteers for mileage, as long as the mileage is recorded and billed.

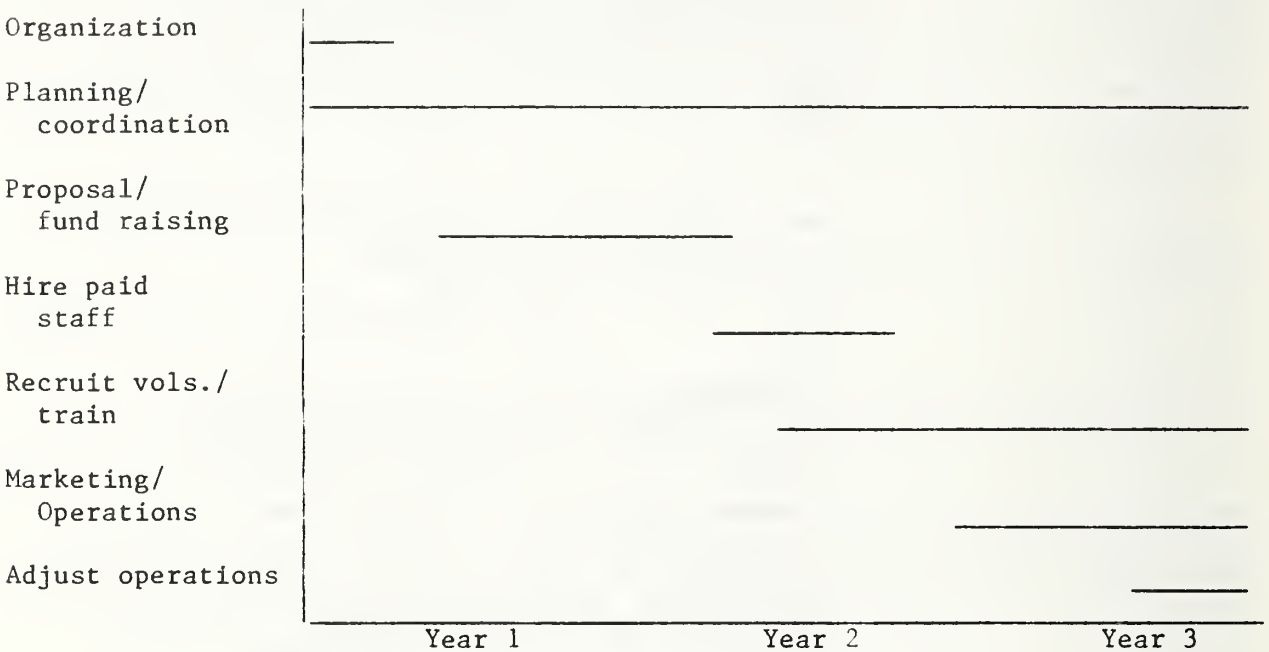
This planning process requires numerous meetings, writing of draft agreements, discussions with agency heads. The systems interviewed in this study reported an average planning period time of 17 months (low as 2; high was more than 100).

Table 8 presents the range of staff time inputs required during the start-up period. This table reports the time which it took to accomplish various tasks so that organizations could get into operation. The results are surprising evidence of the protracted start-up period needed to generate an organization capable of using volunteers on a large scale. Just to get to the stage where organizations have decided that they want to start a transportation program may take as many as 1,000 hours of staff time (the mean time reported was 157 hours). Getting the needed funds by writing proposals may take another 85 hours of staff time, but the wait may be as much as two years (latter figure not shown on table). Other time-consuming tasks in the start-

up phase include recruitment of volunteers (average of 91 hours), training volunteers (average of 38 hours), and designing the routes and schedules (57 hours).

Obviously some tasks can be completed concurrently. Figure 1 suggests a typical flow chart of activities during the start-up phase. A more detailed discussion will be found on page 16, discussing Table 13, the elapsed time required to achieve designated milestones.

FIGURE 1



The Economic Value of Volunteer Transportation Services

It has just been demonstrated that setting up a transportation system to involve volunteers is costly, both in time and money. Does the end result justify this investment? Yes, if one may follow the example of the successful volunteer programs studied in this research. From Table 9, the average system received 106 volunteers, who, again on average, donated a collective total of 499 hours during the previous month.

The annual dollar equivalent of volunteer services averaged $69,750, a figure very closely resembling the annual average cash cost of these systems. One system reported receiving more than $370,000 worth of volunteer hours, which figured at more than ten percent of the annual operating budget of the agency.

Clearly these are substantial sums. The agencies recognize the vital economic contribution of the volunteers, and feel their programs would collapse without such support. The average percentage of budget saved through the use of volunteers is fifty-one percent. The low was ten percent; the high was 100%, as two systems were entirely staffed and funded by volunteers.

Volunteers were used as drivers, as escorts, and as dispatchers. Occasionally, volunteer managers contributed time to organization and direction of the project. One system uses paid drivers exclusively, but uses volunteers as escorts.

Productivity and Output of Volunteer-supported Transportation Programs

For one dollar's worth of volunteer time (valued at prevailing wage equivalents) one gets close to one third of a passenger trip. Table 10 offers this, and several other ways to look at the output of the volunteer supported systems.

The average reported number of individual persons served annually in these volunteer based programs was 4,100, with a range from one to 19,700. The average numbers of hours of passenger service were 2,019, with an average number of passenger miles per year of 26,592. Here the range in reported passenger miles was from 470 miles per annum to 89,901.

The study did not differentiate the "output" of the volunteer component per se, as contrasted with the total organization. However, the next section discusses the extent to which paid staff and volunteers share responsibilities for various organizational tasks.

Task Distribution among Volunteers and Paid Staff

Agencies differed in their use of volunteers and paid staff. Some just had a few volunteers, mainly as clerical support. Others relied on the volunteers as the main staffing of the program. The lesson is clear. One can use volunteers in just about any assignment, and in just about any ratio to the numbers of paid staff. The variations are many. There seem to be no set rules on where volunteers should be used, and where paid staff are necessary.

Such a finding is at odds with the commonly held belief that it is impossible to find enough trained volunteers to perform a transportation function.[1]

Table 11 offers the results for twenty cases from which we were able to get information. Paid workers, or paid staff plus volunteers, were largely responsible for setting up the organizations. The vast majority (18 of 20) used paid staff to write proposals, for example to receive vehicles. Seventeen out of twenty used paid staff to hire staff; twelve used paid staff to arrange for substitute volunteers.

Fourteen of the organizations used volunteers as drivers. Ten used volunteers for dispatching. Other functions in which volunteers were used include planning and escort service.

Volunteers are the predominant source of escorts, according to Table 12. Twice as many hours come from volunteer drivers, on average, than are derived from paid staff. On the other hand, the average number of paid worker hours per month in management is 16 hours, as contrasted with a mean of three hours of volunteer management time. Distributions for other categories may be seen in Table 12.

Elapsed Time Requirements

Table 13 is a helpful guide to the expected length of time required to pass selected milestones in the development of the project. The average amount of elapsed time to reach an agreement about starting a transportation service was 5.2 months, ranging from a low of one month to a high of fifteen months. Proposal development and securing funding consumed 5.8 months and 5.9 months respectively. Because of the long lead times, it is particularly helpful to have, or borrow, paid staff from agencies to complete the start-up phases.

In most systems, the program planning and service development have taken a long time to achieve. The average number of months was reported as 17.1, with a low of two months, and a high of over 100 months. Recruiting of volunteers, an ongoing process, was estimated to take several years to build a full complement; the low was two months.

Training of volunteers was not performed by some of the organizations. Others spent quite a bit of time on this process, an average of five months. Volunteers are typically screened for insurance coverage, state police records, and introduced to vehicles. Sometimes a defensive driving course, training in CPR, and sensitivity training are made a part of the training. Some hospitals offer briefings to volunteers, discussing cancer, how to handle someone in a wheelchair, or other topics which improve the functioning of the volunteers.

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[1] In four recent site visits completed for this project to areas with no rural transportation program, there was unanimous sentiment that a volunteer program probably could not be started.

Setting up routes and schedules, and then adjusting them as the demand materializes, may occur over a period of several months. The average elapsed time was 19 months. The lowest was one month. The highest indicated continual review of routes and schedules.

Examples of Budgets

In reviewing the costs and cash flow of a project over time, it is useful to compare the annual outlays for several different types of volunteer-supported transportation programs. Table 14 offers illustrations of the one year cash flow of:

* a low volume, pure volunteer system

* a moderate volume, pure volunteer system

* two middle volume, mixed paid staff/volunteer systems

* a high volume, minimum volunteer system, and

* a high volume, high volunteer use system.

One notes that whereas annual cash outlays are quite small for both pure volunteer systems, one of the two has an insignificant service level. (See Case I) The other generates a large number of passenger miles (16,000 annually) for a very modest estimated cost of $5,500, which includes donated staff time and space. (See Case II) This is an important model. Where one agency uses its own operating budget to undergird the development of a volunteer-based transportation system, a most cost-effective system, from the society's standpoint, is the result. One of the interesting questions is the cost to the agency of doing this underwriting. What activities would the agency have to curtail or give up to provide transportation? What strains are caused because a transportation program is overlaid another program, thereby diverting energy and money from the "main job" of the agency? In the volunteer systems interviewed, the organizations were able to see benefits of client mobility which more than offset the drain of resources to transportation programs.

Table 14 also provides the breakdown of expenditures for the middle volume systems, where the volunteers make more modest contributions, proportionately, to the total effort, but the scale of service is much larger. In Case III, for example, more than 60,000 vehicle miles are produced for an annual cash outlay of $43,500, or a cost per vehicle mile of slightly more than $.72. By comparison, the larger system shown in Case IV produces 148,000 vehicle miles for an annual outlay of $76,168, or a little more than $.51 per mile.

Finally, the very large systems, which use volunteers as adjuncts, are shown in Case V and VI of Table 14. In the first case, 1.2 million vehicle miles are generated, at an average cash outlay of $.26 per mile. In Case VI, 3.29 million vehicle miles come at an annual cash cost of $1.02. In the latter case, paid drivers and considerable federal and state support explain a higher cost of operation.

From the previous examples, one sees that the cost per unit vehicle mile varies widely, with different trip patterns, different organizational setups, different mixes of volunteers and paid staff, and different scales of operation. Table 15 again exhibits this diversity. It shows the variety of different levels of cash outlay which may occur within mixed volunteer/paid staff organizations. The cases shown here range from an annual cash outlay of $2,460 to $327,313. All use volunteers to an important degree. All have found considerable cost-saving from the use of volunteers. These results should encourage agencies of many different sizes to consider the potential for incorporating volunteer services into their own programs.

Summary Output and Financial Characteristics of the Systems Studied

Given the number of staff hours described above, it is not surprising to note that these systems had an average cost of $4,000 to initiate the system. Meetings, proposal writing, surveys, publicity, interface with regulatory groups, and initial organizational costs take considerable time, and some cash outlay. In some cases reported, the costs were substantially higher, as may be seen in Table 16.

The average start-up investment of $4,000 really pays off. The average annual net return from this investment was $69,371 in value of donated volunteer services. Small agencies got back less; others got more, but all agencies found the initial investment was paid back quickly in cost-savings.

The initial start-up phase averaged 21 months. Few did it in less than three months. Delays occur in getting responses to submitted proposals, in acquiring vehicles, in getting permits, and in securing volunteers. These delays are to be expected, and it may be of help to realize that most systems were not built in one or two months.

Cash costs may be high in volunteer systems. Again from Table 16, the average cash budget for the systems studied was $171,488, but that figure is unduly influenced by the very large budgets of the most extensive systems. As shown in Table 15, the average annual cash outlay of the smaller mixed systems was $98,531.

Taking all the systems together, the average cost per vehicle mile comes to approximately $.83 (derived from dividing the average number of total vehicle miles into the average total dollar outlay). This figure includes the imputed cost of gas donated by volunteers. Looking only at cash outflow from the agencies the average cost per vehicle mile falls to $.67.

Output is trips of persons, not vehicle miles *per se*. Not all agencies kept track of this number, but for those who did, the average cost per client trip was $6.68. Again, these results varied widely from agency to agency.

The average time the reporting organizations had been in existence was seventy-seven months. Usually more than one agency was involved in the program. The budgets were met by sharing resources out of the various agency budgets, through contracts or fee-for-service arrangements. Volunteers merely helped to keep down costs, and did not eliminate the need for cash.

These agencies are heavily dependent upon government sources for the funds they spend. Sixty-three percent of the budgets come from government

sources; thirty-four percent of the total budget comes from state and local sources, at least as it appears to the agency. Volunteers give, on balance, more hours than do paid staff, but the pattern varies considerably from agency to agency.

These data on volunteer-supported transportation systems generally come from the rural areas. These counties tend to have considerable numbers of elderly persons. For example, the average percentage of the county which is Medicare eligible was 11.2 percent. These programs serve an average of 4,093 individual persons per program (though this figure may be upwardly biased by the larger systems). The average total seat capacity is 218, a figure again influenced by the presence of a few large systems. See Table 16. To finance the cost of operating, maintaining, and replacing this value of capital stock will continue to require considerable cash support from external sources.

Summary and Conclusions

It is often thought that rural areas derive mobility through a network of informal transportation modes: friends and relatives meeting the needs of the transit dependent on a volunteer basis. This pattern still is prevalent in many rural areas, though the increasing labor force participation of women and the tendency of younger elderly to move away from rural areas may threaten the future pool from which these informal systems obtained its staffing. Multi-generational families no longer live in close proximity.

In place of the purely volunteer systems, a number of interesting examples of mixed volunteer/paid staff systems have been presented in this study. Volunteers on average save fifty percent of the operating cost of agencies, thereby permitting much higher productivity of service with relative economy. Volunteers play an important role, both economic and social, in these agencies.

The agencies in this study have come to depend upon volunteers. And they have found them dependable. Most are enthusiastic about the quality and quantity of volunteer service, and feel that they can continue their programs with partial volunteer service more or less indefinitely. They are not worried about turnover, absenteeism, or poor driving records. Volunteers are usually screened for prior driving history. They are recruited from among local residents, and thus know the geography of the area very well, as well as the clients themselves.

The purely volunteer systems, where management, drivers, escorts, and dispatchers are all unpaid, seem to produce much smaller levels of service than the mixed systems. One does not find pure volunteer systems generating in excess of 50,000 vehicle miles of service per annum.

The mixed systems, on the other hand, can be very small or very large. They offer a great variety of service levels, at a great variation in cost. All the systems studied offered door-to-door service, and tended to limit service to special target groups. Productivity and cost-effectiveness also vary widely with size, organization, geography. Differing goals of the organizations may also serve to explain the varying results. Some focus on medical trips; others provide general transit service to elderly.

Those interested in initiating a volunteer-supported transportation service are encouraged to read the technical reports listed in the Bibliography.

TABLE 1. - RURAL DOLLAR OUTLAY FOR TRANSPORTATION BY VOLUNTEER SIZE

Volunteers	Total dollar outlay	
	0 to $10,000	Over $10,000
1 to 20	2	1
Over 20	3	10 (of which 8 were over $50,000)

No information: 4

TABLE 2. - YEARLY MILEAGE BY VOLUNTEER SIZE

Volunteers	Yearly mileage	
	0 to $10,000	Over $10,000
1 to 20	2	0
Over 20	2	11

No information: 5

TABLE 3. - SYSTEM CHARACTERISTICS

Who is eligible to ride?

Agency clients only	45%
Elderly and handicapped at large	30%
General public	25%

How many vehicles are registered?

0 - 1	22%
2 - 3	11%
4 - 10	11%
11 - 20	16%
Over 20	22%
No information	18%

Organization started with all volunteers?

Yes	45%
No	55%

Started with a single agency??

Yes	20%
No	80%

Who supervises volunteers?

Volunteer	15%
Paid Staff	70%
No information	15%

How much turnover is there?

Negligible	40%
Moderate	45%
High	0
No information	15%

Will service expand by more than 10$ during the next two years?

Yes	60%
No	30%
No information	10%

TABLE 4. - SERVICE CHARACTERISTICS

	Percentage of agencies:
- Door-to-door pickup	100
- Offers general mobility for selected clients	90
- Carry bags	85
- Most passengers know driver's name	85
- Telephone ordering of service	80
- Receive more calls than they can handle	75
- Charge for rides	55
- Advertising	40
- Offers general mobility for the general public	25
- Meals on wheels	25
- Meet all transportation needs of transportation dependent physically disabled	20
- Meet all transportation needs of transportation dependent elderly	15
- Meet all transportation needs of transportation dependent low income persons	15
- Mobility for a club	10
- Car pooling	5

TABLE 5. - INCENTIVES OFFERED TO THE VOLUNTEERS

	Percentage
Opportunity to help	85
Travel reimbursement	55
Social opportunity	55
Tax write-offs	40
Food	15
Other expenses	10

TABLE 6.

With no volunteers:	Agree	Disagree	Total
- Service would be more dependable	2	18	20
- Budget would be higher by more than 25%	9	11	20
- Service would be less caring	9	11	20
- Agency could demand more responsibility	3	17	20
- Agency could not afford to operate	16	4	20

TABLE 7. - INFORMATION ON FUNDING

Agencies which:	Percentage
- Have funding which is assured for the next six months	65
- Have more volunteers than two years ago	60
- Have more dollar resources now than two years ago	50
- Have no local in kind services or personnel	45
- Have no State funding	30
- Have Section 16(b)(2) funds	30
- Have no human service or community organizational funding	25
- Have no Local Government funding	20
- Have no Federal funding	20
- Have Section 18 funds	15
- Have Medicaid funds	10
- Lost one or more significant funding sources in the last year	5
- Have mental health funds	5
- Have Older American's Act funds	5
- Have Community Block Grand funds	5

TABLE 8. - HOURS SPENT IN INITIATING THE PROGRAM TO THE POINT WHERE SERVICE STARTS

	Total number of hours spent (mean)	Lowest response	Highest response
A. Calling initial organizational meetings	85	3	510
B. Getting agreement to start a transportation service	157	6	1,000
C. Meeting with other organizations to consolidate or coordinate service	45	0	100
D. Writing proposals for funding (only during the initial period before vehicles started on the road)	30	0	100
E. Getting needed funds to get started	85	0	500
F. Meeting with key officials to get approvals (leases, donations of space, permits, etc.)	20	0	50
G. Planning and service program	76	4	200
H. Hiring staff	19	0	30
I. Recruiting volunteers	91	30	200
J. Training volunteers	38	0	99
K. Training other paid drivers	33	0	80
L. Publicity	20	1	100
M. Arranging insurance	25	0	100
N. Setting up routes and schedules	57	0	100
O. Making experimental changes in routes and schedules	22	0	80
P. Other tasks involved in start-up	20	0	80

TABLE 9. - THE ECONOMIC VALUE OF VOLUNTEER TRANSPORTATION SERVICES

	Mean	Lowest value	Highest value
A. Number of volunteers during the last month	106	2	933
B. Number of volunteer hours contributed during the last month	499*	4	6,565
C. Dollar equivalent of Volunteer time contributed during the last year	$69,750	25	$371,570
D. Total Dollar outlay for the transportation program (no information from 10%)	$69,371	0	$3.29M
E. Percentage of budget saved by using volunteers	51%	10%	100%

*Mean does not include the outlier, OATS.

TABLE 10. - PRODUCTIVITY MEASURES OF VOLUNTEER-SUPPORTED TRANSPORTATION PROGRAMS

(MONTHLY STATISTICS:) Measures of output (figures for September, 1984)	Mean	Lowest value	Highest value
A. Number of passengers boarded	388	1	1,311
B. Number of passenger trips (one way)	5,723	5	50,935
C. Number of passenger miles	26,592	470	89,901
D. Number of vehicle miles on agency vehicles	25,745	0	over 99,999
E. Number of hours of service	2,019	0	over 9,999
(ANNUAL STATISTICS:)			
F. Total mileage, all vehicles including volunteer cars	254,000	0	3.29M
G. Total number of passengers (individual persons) served	4,100	1	19,700
H. Productivity (Passenger trips, annual, divided by $ value of volunteer time)	.308	-	-

TABLE 11. - PAID VERSUS VOLUNTEER SOURCES OF STAFF BY TASK

Task	Number of agencies			
	Paid only	Volunteers from agency	Open Volunteer	Paid and Volunteer
Setting up organization	10	2	3	5
Applying for vehicles or grants (although some do not seek any funds, use volunteer cars)	18	0	1	1
Planning	11	1	1	5
Surveys of need	13	1	1	5
Hiring staff	17	0	0	3
Finding substitutes for no-show volunteers	12	1	1	6
Publicity	15	0	1	4
Insurance	18	0	0	2
Maintenance of vehicles	16	1	0	3
Dispatching	10	0	2	8
Driving	6	5	1	8
General Management	14	1	1	4

Sample Size: 20

TABLE 12. - USE OF VOLUNTEERS VERSUS PAID STAFF, BY TASK
(Data reported for month prior to interview)

Task	Number of Volunteer Hours	Number of Paid Worker Hours
Management	Mean = 3	Mean = 16
	(Range) = 0 - 24	(Range) = 0 - 99
Driving	Mean = 50	Mean = 28
	(Range) = 0 - 99	(Range) = 0 - 99
Dispatching	Mean = 12	Mean = 20
	(Range) = 0 - 99	(Range) = 0 - 99
Clerical	Mean = 12	Mean = 22
	(Range) = 0 - 80	(Range) = 0 - 99
Escort	Mean = 11	Mean = 0.1
	(Range) = 0 -51	(Range) = 0 - 1
Other	Mean = 12	Mean = 14
	(Range) = 0 - 99	(Range) = 0 - 99
TOTAL	Mean = 176	Mean = 89
	(Range) = 0 - 971	(Range) = 0 - 999

TABLE 13. - ELAPSED TIME REQUIREMENTS TO PASS SELECTED MILESTONES

Task	Mean months required to pass milestone	Lowest number of months reported	Highest number of months reported
A. Calling initial organizing meeting	5.3	1	15
B. Getting agreement to start a transportation service	5.2	1	15
C. Meeting with other organizations to consolidate or coordinate service	24.6	2	99 or more
D. Writing proposal for funding (only during the initial period before vehicles started on the road)	5.8	1	12
E. Getting needed funds to get started	5.9	1	15
F. Meeting with key officials to get approvals (leases, donations of permits, etc.)	5.4	0	50
G. Planning the service and program	17.1	2	99 or more
H. Hiring staff	16.4	1	99 or more
I. Recruiting volunteers	33.7	2	99 or more
J. Training volunteers	5.0	0	9
K. Training other paid drivers	1.7	0	2
L. Publicity	4.9	2	12
M. Arranging insurance	3.8	0	14
N. Setting up routes and schedules	19.0	1	99 or more
O. Making experimental changes in routes and schedules	34.7	2	99 or more
P. Other tasks involved in start-up	3.7	1	8

TABLE 14. - CASE EXAMPLES OF ONE YEAR CASH FLOW, WITH SOURCES

Case I. Low volume, pure volunteer system

Total number of passenger trips		15
Average trip length		12
Total annual mileage		180
Dollar expenditure		
By volunteers		
telephone (uses home phone)	0	
gasoline & oil	$ 17.50	
insurance (no surcharge for volunteering)	0	
By agency		
publicity (uses newsletter which goes out regardless of program)	0	
TOTAL ANNUAL OUTLAY	$ 17.50	

Case II. Moderate volume, pure volunteer system

Total number of one month's one-way passenger trips		187
Number of passenger miles (annual estimate)		16,282
Dollar expenditure		
gas and oil (paid by volunteers)	$ 493	
organizational overhead (donated by Volunteer Center)	5,000 (estimate)	
TOTAL ANNUAL OUTLAY	$ 5,493	

Table continued on next page

TABLE 14. - CASE EXAMPLES OF ONE YEAR CASH FLOW, WITH SOURCES (continued)

Case III. Middle volume, mixed paid/volunteer system

Total annual mileage, all vehicles, including volunteers		60,097
Total number of individual persons who rode (approximately)		8,500
Dollar expenditure (annual)		
By volunteers		
transportation costs	$ 2,000 (estimate)	
By agency		
gas, oil, repairs	$ 6,000	
space	600	
telephone	800	
drivers, paid	19,000	
manager	8,100	
clerical	4,500	
insurance	2,500	
TOTAL ANNUAL OUTLAY	$ 43,500	

Case IV. Middle volume, mixed paid/volunteer system.

Total annual mileage, all vehicles, including volunteers		148,213
Total number of annual passenger trips		8,804
Total number of individual persons who rode		1,157
Dollar expenditure (annual)		
By volunteers		
transportation costs	n/a	
By agency		
gas, oil	$ 35,362 (state funds)	
manager	14,692 (state funds)	
schedulers	20,724 (block grant)	
insurance	842 (block grant; state funds)	
administrative costs	4,300	
miscellaneous	248	
TOTAL ANNUAL OUTLAY	$ 76,168	

Table continued on next page

TABLE 14. - CASE EXAMPLES OF ONE YEAR CASH FLOW, WITH SOURCES (continued

Case V. High volume, minimum use of volunteer system

Total annual mileage, all vehicles, including volunteers	1,245,526
Total number of vehicles registered	155
Total number of passenger trips	154,774

Dollar expenditure (annual)

By volunteers	$ 680 (estimate)
By agency	
gas, oil	$ 78,169
tires	4,147
space	12,000
telephone	4,200
drivers	116,540
managers	40,904
vehicle maintenance	16,774
computer	3,000
record keeping	27,297
spare parts	10,092
training/travel	7,240
printing/postage	6,270
TOTAL ANNUAL OUTLAY	$327,313

Case VI. High volume, high use of volunteers

Total annual mileage, all vehicles including volunteers	3,290,000
Total number of vehicles registered	160
Total number of passenger trips	616,276
Total number of passengers (individuals) who rode	19,119

Dollar expenditure

By volunteers	$ 1,200 (estimate)
By agency	
gas and oil	409,003
tires	29,450
space	22,034
telephone	38,025
drivers	1,071,182
managers	267,905
secretary (included above)	

Table continued on next page

TABLE 14. - CASE EXAMPLES OF ONE YEAR CASH FLOW, WITH SOURCES (continued)

Dollar expenditure (annual) continued

By agency	
vehicles	$ 632,343
vehicle maintenance	217,613
computer	27,029
record keeping	458,370
spare parts	n/a
other area office expense	69,806
insurance	124,165
depreciation	69,806
other driver expenses	59,194
TOTAL ANNUAL OUTLAY	$3,383,688

TABLE 15. - SELECTED EXAMPLES OF DOLLAR OUTLAY BY SYSTEM TYPE

I. PURE VOLUNTEER SYSTEM

Case I.	No organizational cost
Case II.	Less than $200 per year for volunteer expense reimbursement

II. MIXED PAID STAFF/VOLUNTEER SYSTEM (Selected Examples)

Case I.	$ 2,460
Case II.	22,377
Case III.	51,500
Case IV.	76,168
Case V.	101,361
Case VI.	101,369
Case VII.	105,700
Case VIII.	327,313
Average	$ 98,531

TABLE 16. - SELECTED CHARACTERISTICS OF THE SYSTEMS STUDIED[1]

	Mean	Standard Deviation
Dollars to start-up system	$ 3,976	3,800
Value of volunteer services	69,371	115,327
Number of months in the start-up phase	21	28
Cash budget	171,488	257,826
1984 total dollar outlay for program	210,965	272,695
1984 total vehicle miles	254,800	317,000
1984 total passenger miles	261,300	420,900
Total number of trips produced in 1984 divided by the hours of volunteer time	25.5	28.6
Total cash outlay of the organization divided by the number of client trips	6.68	6.28
Total number of months program has been in operation	77.4	58.1
Number of agencies involved in the program	2.4	2.9
Percentage of total cash budget coming from any government source	63.3	43.6
Percentage of total cash budget coming from state and local sources	33.6	32.5
Ratio of volunteer hours to paid hours	1.38	-
Income of county	10,631	2,847
Population density of county	27.4	25.3
Percentage of the county population which is Medicare eligible	11.2	1.8
Total number of passenger trips produced in 1984	26,870	33,595
Total number of individual persons served in the program in 1984	4,093	5,681
Total seat capacity (does not include volunteer drivers' cars)	218	352

[1]These numbers are unduly influenced by the effect of averaging in OATS (Missouri), a very large system.

APPENDIX A.

Phone Questionnaire

1.a What is your name? _____

b What is your title? _____

2. What is the population of your town? _____

3. What is the nearest city of 50,000 people or more? _____

4. How long does it take to reach the city by car? _____

TRADITIONAL PROVIDERS

5. Is there an intercity bus line which serves your town? _____

6. Is there a cab service in your town? _____

SPECIAL PROVIDERS

7. Do you know of any transportation service in your town which involves the use of volunteers? _____

8. Do any social service agencies supply transportation service: (i.e. office of the Aging)? _____

9. Do any religious or non-profit organizations provide transportation? _____

_____

10. Do you know of any car pooling in your community?

A. formal _____
B. informal _____

11. Do you know of any van pooling in your community?

A. formal _____
B. informal _____

12. Are there any ride clubs in your community. (supply explanation) _____

_____

13. If I were elderly or handicapped in your town, could I call someone, other than a friend or relative, for a ride? _____

_____

14. Do you know of anyone else in your community who could provide helpful information on this subject?

A. Name _____
B. Number _____

15. Would you be willing to fill out a more extensive questionnaire? _____

A. Address _____

APPENDIX B.

SYRACUSE UNIVERSITY

Franklin Program in
Transportation and Distribution Management
Theodore O. Wallin, Director

.....

Your voluntary cooperation in supplying information in this request will help other organizations learn from your experience with the use of volunteers in transportation programs. This information is sought by Syracuse University in order to prepare instructions for other organizations which plan to use a volunteer component in their service.

The first section asks for descriptive information about your use of volunteers and about your agency.

BACKGROUND INFORMATION: 1-2 ID __ __

Name of the Transportation Program_____

Is there a parent organization_____

Address of the Transportation Program_____

Telephone ( )_____Person answering_____

Title of person answering_____Date_____

1. Please list the numbers of volunteers you used during the last month and the organizations which supplied the volunteers

Organization_____Number____

Organization_____Number_____

Organization_____Number_____

Organization_____Number_____

Individuals with no affiliation_____Number_____

TOTAL NUMBER OF INDIVIDUALS WHO VOLUNTEERED_____ 3-6 __ __ __ __
Note: The numbers should add to the total.

2. During the last year, what was the largest number of volunteers working in one month?_____.

OFFICE USE ONLY: Category (see handbook) 7 __

3. During the last month, how many persons spent the following number of hours working?

Number of hours:	Number of Persons:
0 - 1	.
1.1 - 2	.
2.1 - 3	.
3.1 - 4	.
4.1 - 6	.
8.1 - 10	.
10.1 - 20	.
20.1 - 40	.
Over 40 (specify)	.

4. Office Use: Calculate the total number of volunteer hours contributed last month and record here: _____ 8 - 10 _ _

5. How were these hours distributed by task:

Task	Number of Volunteer Hours spent Last Month	Number of Paid Worker Hours spent Last Month
Management (11-12) (13-14)	_____	_____
Driving (15-16) (17-18)	_____	_____
Dispatching (19-20) (21-22)	_____	_____
Clerical (23-24) (25-26)	_____	_____
Escort (27-28) (29-30)	_____	_____
Other (specify) (31-32) (33-34)	_____	_____
TOTAL ..... (35-37) (38-40)	_____	_____

6. What is the hourly rate you pay any of your Paid Staff?
(For salaried personnel, divide the annual salary by 2000 hours).

	Number of persons receiving	Job Titles (e.g. driver)
$ 1.00 - 3.50		
$ 3.51 - 4.00		
$ 4.01 - 5.50		
$ 5.51 - 7.00		
$ 7.01 - 10.00		
$10.01 - 13.00		
$13.01 - 16.00		
$16.01 - 20.00		
Over $20.00		

FOR OFFICE USE: What is Dollar Equivalent of Volunteer Time, by Agency Pay Scale (consult manual)

41-46 _ _ _ _ _ _

7. How do you measure your service produced in one month

CHECK ALL WHICH APPLY

a._____	Number of passengers boarded	a._____(47-51)
b._____	Number of passenger trips (one way)	b._____(52-56)
c._____	Number of passenger miles	c._____(57-61)
d._____	Number of vehicle miles	d._____(62-66)
e._____	Number of hours of service	e. _____(67-70)
f._____	Number of clients enrolled	f. _____ (71)
g._____	Number of calls	g. _____ (72)
h._____	Total fares or donations	h. _____ (73)
i._____	Other (specify)	i. _____ ( )

8. What are your annual statistics for 1984 on:

A. Number of vehicles registered: _____
RECORD ACTUAL NUMBER

Code: OFFICE USE:
1. 0-1
2. 2-3
3. 4-10
4. 11-20
5. 21-50
6. Over 50

_____(71)

B. Total dollar outlay for the transportation program:

_____

Code: OFFICE USE:
(thousands of dollars)
1. 0-1
2. 2-3
3. 4-10
4. 11-20
5. 21-50
6. Over 50

_____(71)

C. Total mileage (all vehicles, including those of volunteers using their own vehicles)

_____

Code: OFFICE USE:
(thousands of miles)
1. 0-.1 (i.e. 0 to 100 miles)
2. .101 to 1 (i.e. 101 to 1000 miles)
3. 1.01 to 3
4. 3.01 to 10
5. 10.01 to 20
6. 20.01 to 50
7. Over 50

_____(72)

D. Total numbers of passenger miles

_____

Code: OFFICE USE:
(thousands of miles)
1. 0-1
2. 2-3
3. 4-10
4. 11-20
5. 21-50
6. Over 50

_____(73)

8E. Total number of passenger trips

_____

Code: OFFICE USE:
(thousands of trips)
1. 0-1
2. 2-3
3. 4-10
4. 11-20
5. 21-50
6. Over 50

_____(74)

F. Total numbers of individual persons who rode:

_____

Code: OFFICE USE:
(hundreds of persons)
1. 0-1
2. 2-3
3. 4-10
4. 11-20
5. 21-50
6. Over 50

_____(75)

G. Total seat capacity:

_____

Code: OFFICE USE:
1. 0-3
3. 4-10
4. 11-20
5. 21-50
6. Over 50

_____(76)

CARD ONE....._1___(80)

CARD TWO ID _____ (1-2)

9. If you had no volunteers, which of the following would be true for your organization.

CHECK ALL WHICH APPLY

a. service would be more dependable _____ (3)

b. our budget would be higher (more than 10% higher but less than 25%) _____ (4)

c. our budget would be higher (more than 25% higher) _____ (5)

d. service would be less caring _____ (6)

e. we could demand more responsibility from our workers _____ (7)

f. we could not afford to operate _____ (8)

10. How did your transportation operation get started? (i.e. On whose initiative? What organizations were involved? Who paid the cost of getting it started?

CHECK ALL WHICH APPLY

a. the initial organizational impetus was strictly by volunteers _____ (9)

b. the initial organizational impetus was by a single human service agency _____(10)

c. the initial organizational impetus was by a group of human service agencies _____(11)

d. more than half of time spent in getting the program started was by paid staff _____(12)

e. vehicles, or use of vehicles was donated _____(13)

f. it was planned to staff it mainly with volunteers _____(14)

PART TWO. USE OF VOLUNTEERS

11. Below is a list of tasks and organizations. For your transportation project, please indicate which organization or type of person performed the task, whether she/he was a volunteer, and supply other information requested.

Key: Place an X in each column, with the appropriate choice(s.)

Table 1. TASKS:	Setting up Organization (15)	Applying for Vehicles or grants (16)
Who does it?		
PAID STAFF		
VOLUNTEERS		
Civic organization (specify)_____		
Employer group or firm		
Friends of Elders		
Green Thumb		
Religious group		
RSVP (Retired Senior Volunteer Program)		
Students		
VISTA (Volunteers in service to America)		
Other Organizations		
Other Organizations		
OTHER INDIVIDUALS		

Tasks	Planning (17)	Surveys of Need (18)

Table 2

Who does it?

PAID STAFF

VOLUNTEERS

Civic organization (specify)_____

Employer group or firm

Friends of Elders

Green Thumb

Religious group

RSVP (Retired Senior Volunteer Program)

Students

VISTA (Volunteers in service to America)

Other Organizations

Other Organizations

OTHER INDIVIDUALS

TASKS:	Hiring Staff(19)	Training Staff(20)	Finding Substitutes(21) for no/show vol.

Table 3.

Who does it?

PAID STAFF

VOLUNTEERS

Civic organization (specify)_____

Employer group or firm

Friends of Elders

Green Thumb

Religious group

RSVP (Retired Senior Volunteer Program)

Students

VISTA (Volunteers in service to America)

Other Organizations

Other Organizations

OTHER INDIVIDUALS

Tasks	Publicity (22)	Insurance (23)	Maintenance (24)

Table 4

Who does it?

PAID STAFF

VOLUNTEERS

Civic organization (specify)_____

Employer group or firm

Friends of Elders

Green Thumb

Religious group

RSVP (Retired Senior Volunteer Program)

Students

VISTA (Volunteers in service to America)

Other Organizations

Other Organizations

OTHER INDIVIDUALS

	Dispatching (25)	Driving (26)	General management (27)
Table 5.			
Who does it?			
PAID STAFF			
VOLUNTEERS			
Civic organization (specify)_____			
Employer group or firm			
Friends of Elders			
Green Thumb			
Religious group			
RSVP (Retired Senior Volunteer Program)			
Students			
VISTA (Volunteers in service to America)			
Other Organizations			
Other Organizations			
OTHER INDIVIDUALS			

Are you familiar with the period of start-up? If yes, continue. If no, please refer us to someone who is.

12. It takes a while for any organization to get started . Please estimate to the best of your knowledge the total hours spent, and the starting and ending months for each of the tasks outlined below:

	Total hours spent performing the task	Month/Year task begun	Month/Year task ended
A. Calling initial organizational meetings	(28-30)		(31-33)
B. Getting agreement to start a transportation service	(34-37)		(38-40)
C. Meeting with other organizations to consolidate or coordinate service	(41-43)		(44-46)
D. Writing proposals for funding (only during the initial period before vehicles started on the road)	(47-49)		(50-51)
E. Getting needed funds to get started	(52-54)		(55-56)
F. Meeting with key officials to get approvals (leases, donations of space, permits, etc.)	(57-59)		(60-61)
G. Planning the service and program	(62-64)		(65-66)
H. Hiring staff	(67-69)		(70-71)
I. Recruiting volunteers	(72-74)		(75-76)
J. Training volunteers	(77-78)		(79)

CARD THREE/ ID IN COLUMN 1-2 ___ ___

K. Training other paid drivers	(3-5)	(6-7)
L. Publicity	(8-10)	(11-12)

	Total hours spent performing the task	Month/Year task begun	Month/Year task ended
M. Arranging insurance	(13-15)		(16-17)
N. Setting up routes and schedules	(18-20)		(21-22)
O. Making experimental changes in routes and schedules	(23-24)		(25-26)
P. Other tasks involved in startup (specify)	(27-28)		(29-30)

13. Who supervises the volunteers? 1._____ A volunteer 2.____ A paid staff member (31)

14. How would you describe turnover in volunteers

1. _____ Negligible

2. _____ Moderate

3. _____ High (32)

15. What lessons have you learned from using volunteers:

16. What are the costs associated directly with the work which the volunteers perform? (Instruction: Costs should be cash costs associated with their specific tasks. There are cash costs to the system only. If a volunteer donates the item, record it below in Q. 21 -IV.)

$ per hour per volunteer for:

_____ gasoline (33-34)
_____ travel reimbursement (35-36)

_____ other expenses (specify) (37-38)

17. What other incentives are offered to volunteers:

CHECK ALL WHICH APPLY

Coding: 1 = Yes 2 = No

_____ Tax write-offs (39)
_____ Travel reimbursement (40)
_____ Food (41)
_____ Other expenses (42)
_____ Social opportunity or experience (43)
_____ Publicity (44)
_____ Opportunity to help (45)
_____ Other (explain)_____

_____

_____

_____

_____

18. For how long from now do you think that the volunteer component of this transportation organization will continue?_____ (46-47)
(Give answer in months; if "permanent" code 99.)

19. For how long from now do you think that this transportation organization will continue to provide transportation service?_____ (48-49)
(Give answer in months; if "permanent" code 99.)

20. Does this transportation organization expect to expand service by more than 10% during the next two years? _____ 1. Yes _____ 2. No (50)

If YES: Do you think the use of volunteers will:

1. _____ diminish
2. _____ stay the same
3. _____ increase by one to ten percent
4. _____ increase by more than ten percent (51)

(Instruction: Use any size measure from question 6)

CHECKLIST INFORMATION

21. Below is a list of statements. Please check the ones which apply to your transportation organization.

_____ a. There is no federal support, directly or through social or human service budgets. (52)

_____ b. There is no state level financial support for this program. (53)

_____ c. There is no local government cash support for this project. (54)

_____ d. There is no local government provision of in kind services or personnel. (55)

_____ e. No governmentally supported social service agency or community organization contributes cash or resources. (56)

_____f. Funding is assured, for current staff levels for the next six months. (57)

_____g. We have had to cancel trips because of driver absenteeism during the last year. (58)

_____h. We are meeting all of the transportation needs of the transit dependent elderly in our area. (59)

_____i. We are meeting all of the transportation needs of the transit dependent physically disabled in our area. (60)

_____j. We are meeting all of the transportation needs of the transit dependent low income persons. (61)

_____k. We receive more calls for service than we can handle.(62)

_____l. We charge for rides. (Includes "suggested donations."
How much? _____ (63) (64-66)

_____m. Our transportation service offers door-to-door pickup.(67)

_____n. We help passengers carry parcels or grocery bags. (68)

_____o. Most passengers know the driver's name. (69)

_____p. We have lost one or more significant funding sources in the last year. Specify:_____(70)

_____q. We have more dollar resources now than two years ago.(71)

_____r. We have more volunteers now than two years ago. (72)

22. Check all the categories of service functions which your mobility program currently offers:

_____a. general mobility for selected clients.(73)

_____b. general mobility for the general public (74)

_____c. emergency mobility for select clients (75)

_____d. emergency mobility for general public (76)

_____e. mobility to a single organization (e.g. meals-on wheels) (77)

_____f. mobility only for members of a club (78)

_____g. mobility only for employees of 1 to 4 employers (79)

_____ h. pickup door-to-door (3)
_____ i. delivery door-to-door (4)
_____ j. telephone ordering of service (5)
_____ k. advertising (6)
_____ l. collecting ridership statistics (7)
_____ m. service on demand, without prescheduling (8)
_____ n. service on demand, with 24 hour or more scheduling (9)

23. What are the sources of any resources used in your program? Check all that are currently in use. Also, give the annual dollar outlay where known.

SOURCE CODE: Use these letter codes to indicate the source of funds used to pay for the items listed below:

A. Federal funds Total _____ (Originally from federal source, such as Medicaid, UMTA Section 18, Older Americans Act, etc.)

NOTE: MANY FEDERAL DOLLARS COME THROUGH STATE AGENCIES, BUT SHOULD NOT BE COUNTED AS STATE DOLLARS.

B. State funds Total _____ (Funds appropriated by the state legislature)

C. Local funds Total _____ (Funds provided by local government or by contributions of local organizations)

D. Social service agency budget Total _____ (Funds acquired through a purchase of service agreement with an outside agency, or other funds transferred from a local agency)

NOTE: COUNT ONLY FUNDS NOT LISTED IN SOURCES A, B, AND C ABOVE.

E. Fares or user charge (donation) Total _____ (Contributions paid by the user, either as a monthly fee, or per ride or whatever basis is used.

NOTE: INCLUDE DONATIONS WHICH ARE NORMALLY REQUESTED PER RIDE.

F. Volunteers (time or money) Total _____

	Amount	Source Code;	Amount	Source Code;	Amount	Source Code
Gas & Oil						
Tires						
Space						
Telephone						
Drivers						
Managers						
Secretary						
Vehicles						
Vehicle maintenance and repair						
Computer						
Record keeping						
Spare Parts						
Other (specify)						
Other (specify)						

24. What federal laws or programs directly or indirectly provide this program with cash or resources?

	Dollars Budgeted in FY 84	Dollars Received in FY 84
STAA (UMTA)		
Section 18		
Section 16(b)(2)		
Section 9		
HHS (Health and Human Services)		
Medicare		
Medicaid		
Mental Health		
Mental Retardation		
Other (specify)		

	Dollars Budgeted in FY 84	Dollars Received in FY 84
HUD		
Community block grant		
Other (specify)		
Revenue Sharing		
OTHER		
Employment and training budgets		
OTHER: (specify)		

25. What private funding sources directly or indirectly provide this program with cash or resources?

	Dollars Budgeted in FY 84	Dollars Received in FY 84
1.		
2.		
3.		
4.		

BIBLIOGRAPHY

1) ACTION, Transportation for Older American Volunteers: A Practical "How-To Manual." November 1982. Prepared for Older American Volunteer Programs including Retired Senior Volunteer Program (RSVP), Foster Grandparent Program (FGP) and Senior Companion Program (SCP).

The manual is a guide to volunteers who want to meet the transportation needs of older Americans. It contains useful checklists on how to set up programs, operate vehicles, avoid pitfalls, and get started. It gives interesting exhibits of forms, comments on insurance, and other "nuts and bolts" suggestions.

2) ALLARD, M.A., Rural Transportation for Human Services: A Guide for Local Agencies, Human Services Research Institute, Washington, D.C. 20006.

3) AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, Rural and Specialized Transportation: UMTA Programs and the States, August 1984. Report available from AASHTO, 444 North Capitol Street, N.W., Suite 225, Washington, D.C. 20001 at cost.

4) BURKHARDT, Jon E., Sue F. KNAPP, and Mark J. RAMSDELL, Coordinated Transportation Demonstration Results. Evaluation of the Office of Human Development Services Transportation Demonstration Program. February 29, 1980. Available from the National Technical Information Service, Springfield, Virginia 22161: Order No. PB 85-174852, Price Code A09/A01.

A helpful review of the results of the coordination demonstration experiments. The financial data must be viewed in a special light: federal funds in the form of demonstration grants permitted expansion of service to higher levels than would normally be possible for rural systems. Only one or two of the demonstrations occurred in rural areas.

5) BYRNE, B.F. AND E.S. NEUMANN, Feasibility of Developing Low-Cost Measures of Demand for Public Transportation in Rural Areas. Prepared by West Virginia University, Morgantown, West Virginia 26506.

6) COLLURA, John, et. al., Apportioning the Costs of Rural Public Transportation Among Participating Towns and Human Service Agencies. U.S. Department of Transportation. Prepared by the Department of Civil Engineering, University of Massachusetts, Amherst, Massachusetts 01003. June 29, 1982.

This report offers some relatively straight-forward formulas to sharing the costs of rural transportation among various users, including human service agencies. The report neglects some economic issues, such as economics of scale, but focuses on local techniques, including a limited selection of case studies.

7) CONNECTICUT DEPARTMENT OF TRANSPORTATION, BUREAU OF PLANNING AND RESEARCH, Interest Free Van Pool Program, First Year Report. January 1984. Report is available from the U.S. Department of Transportation's Technology Sharing Program (I-30), Room 9402 Nassif Building, 400 Seventh Street SW, Washington, D.C. 20590 while supplies last.

This document summarizes a very interesting state-originated experiment. The state offers interest-free financing, and mass-purchase of vehicles, to the Rideshare Company which markets, promotes, administers, and monitors the deployment of vans for van pooling. The report discusses finances, regulations, and implementation difficulties.

8) DAVIS, Frank W., Jr. and Stephen LE MAY, Implementing Driver Selection and Training for Human Service Agencies: Administrator's Guidelines. Final Report, May 1980. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 84-222926, Price Code A04/A01.

9) FEISS, Caroline L., Vehicle Maintenance: A Study of Vehicle Maintenance Practices among Section 16(b) (2) Grantees. August 1981. Report prepared by the Public Transportation and Planning Division, Washington State Department of Transportation, Highway Administration Building, Olympia, Washington 98504. Report is available from the National Technical Information Service, Springfield, Virginia 22161.

This report does not itemize the preventive maintenance requirements of designated vehicles. Rather, it describes agency approaches in a general way. It does have some helpful examples of sample maintenance program forms used by grantees.

10) FLEISHMAN, Daniel. The Point-to-Point Club: An Elderly and Handicapped Service based in Ardmore, Pennsylvania. March 1983. Report prepared by Multisystems, 1050 Massachusetts Avenue, Cambridge, MA. 02138, for the U.S. Department of Transportation, Urban Mass Transportation Administration. The document is available from the National Technical Information Service, Springfield, Virginia 22161. Order No. PB 83-209171, Price Code A03/A01.

This report gives institutional details about a cooperative providing transportation services to Club members who pay $10 annually in addition to charges for individual trips.

11) GARRITY, Richard. "Safety and Design Considerations in Wheelchair Life/Van Specifications" in U.S. Department of Transportation. The Sixth National Conference on Rural Public Transportation, Final Report. November 1983. Report is available from the National Technical Information Serivce, Springfield, VA. 22161. Order No. PB 85-114668, Price Code A13/A01.

12) HENDERSON, William H., Raymond L. DABNEY, and David D. THOMAS, Passenger Assistance Techniques: A Training Manual for Vehicle Operators of Systems Transporting the Elderly and Handicapped. Transportation Management Associates, 2 Arthur Drive, Fort Worth, Texas 76134.

13) HOOD, Thomas C. and Linda S. GEISS, The Volunteer Transportation Program: Some Suggestions and Cautions in the Use of Volunteers as Drivers, Escorts, and Other Transportation Workers. Prepared for the Bureau of Mass Transit, Tennessee Department of Transportation by the Transportation Center of the University of Tennessee. Revised, April 1982. Report is available from the U.S. Department of Transportation's Technology Sharing Program (I-30), Room 9402 Nassif Building, 400 Seventh Street SW, Washington, D.C. 20590 while supplies last.

This is a very useful manual which covers the topics of "Why a Volunteer Transportation Program?", "Characteristics and Problems of a Volunteer Transportation Program", "How to Organize a Volunteer Transportation Program" and "Resources." An Appendix gives a sample volunteer guide with some important "nuts and bolts."

14) INDIANA DEPARTMENT OF TRANSPORTATION, DIVISION OF PUBLIC TRANSPORTATION, Specification Guide for Small Transit Vehicles. February 1984. Available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 85-204436, Price Code A04/A01.

A very thorough discussion of vehicle layout, size, and other bases for choice in small transit vehicles. Highly recommended.

15) KIDDER, Alice E. "Cost of Alternatives Systems to Serve Elderly and Handicapped in Small Urban Areas," Proceedings of the Transportation Research Forum, 1976, 131-135.

16) ------. "Economic Costs and Benefits of Rural Consolidated Social Service-Based Transportation." Paper presented at the Annual Meeting of the Gerontological Society of America, San Francisco, November 18, 1983. Available from the author, c/o Babson College, Babson Park, MA 02157.

17) -----. The Financing of Multijurisdictional Public Transportation Services, National Technical Information Service, Springfield, VA. 22161. Order No. PB 80-198625. 1980.

18) -----. "Getting There," in Voluntary Action Leadership, Fall 1975. pp. 23-25. A popularized discussion of rural transportation issues.

19) -----. "Practical Implementation of Innovative Financing in Rural Mobility Programs," in Financing State and Local Transportation, Transportation Research Record Number 1009. 1985. Available from the Transportation Research Board, National Research Council, 2101 Constitution Avenue N.W., Washington, D.C. 20418 at cost.

20) -----. Sources of Non-Federal Support for Public Transportation in Nonurbanized Areas,National Technical Information Service, Springfield, VA. 22161. Order No. PB 284-410. 1978.

21) KIRBY, Ronald F. and Gerald K. MILLER, A Case Book of Short-Range Actions to Improve Public Transportation, Final Report, February 1983. Prepared by the Urban Institute, Washington, D.C. for the Urban Mass Transportation Administration, U. S. Department of Transportation. The document is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 84-211374. Price Code A11/A01.

This study contains examples of high density, home-to-work travel examples for rural and small urban areas, among others. It has a large number of case studies of special user group travel examples and general purpose travel examples, some of which are for rural and small urban areas.

22) MC KELVEY, Douglas J., Evaluating Rural Public Transportation, February 1977. Prepared by the Transportation Institute, North Carolina A & T State University, Greensboro, N.C. 27411 for the Program of University Research, Office of the Secretary of Transportation, Washington, D.C. 20590. The document is available from the National Technical Information Service, Springfield, VA. 22161, Order No. PB-269287 at cost.

23) MEACHAM, D.C. et. al., FY-1985 Vehicle Catalog. Prepared by the Ohio Department of Transportation, Division of Public Transportation, 25 South Front Street, Columbus, Ohio 43216-0899. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 85-218113. Price Code A13/A01.

An extremely thorough and technical guide to the selection of vehicles for paratransit programs. Material on specific vehicles probably will be dated.

24) MINNESOTA DEPARTMENT OF TRANSPORTATION, Performance Evaluation Process. No date

25) MONTANA DEPARTMENT OF COMMERCE, Transportation in Montana: Mass Transportation Inventory, Contact persons: Patricia Saindon, Chief, Passenger Transportation Bureau, Montana Department of Commerce, Capitol Station, Helena, MT. 59620 (406) 444-3423.

This is a 57 page example of a statewide inventory of vehicles and programs.

26) NEWELL, Betty L. and Peter SCHAUER, "A Virginia Model for Financial and Community Support of Rural and Specialized Transportation Systems," in Financing State and Local Transportation, Transportation Research Record Number 1009. 1985. Available from the Transportation Research Board, National Research Council, 2101 Constitution Avenue N.W., Washington, D.C. 20418 at cost.

27) NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, PUBLIC TRANSPORTATION DIVISION, Transportation Development Planning for Nonurbanized Areas, January 1979 (currently out of stock).

28) PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, BUREAU OF PUBLIC TRANSIT AND GOODS MOVEMENT SYSTEMS, Rural Management Assistance Project: Para-transit Case Studies. January 1981. Report is available from the National Technical Information Service, Springfield, Virginia 22161. Order No. PB 84-211390, Price Code A09/A01.

This short, handy guide contained a lot of practical suggestions on the steps to plan transportation in rural areas. Highly recommended, though the document was intended for the context of Pennsylvania, it is generic enough to be useful throughout the United States. Readable.

29) PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, BUREAU OF PUBLIC TRANSIT AND GOODS MOVEMENT SYSTEMS, Rural Public Transportation Performance Evaluation Guide. November 1982. Report prepared by Carter-Goble Associates, P. O. Box 11287, Columbia, S.C. 29211. Report is available from the U.S. Department of Transportation's Technology Sharing Program (I-30), Room 9402, Nassif Building, 400 Seventh Street S.W., Washington, D.C. 20590 while supplies last.

This is a useful report listing alternative indicators of revenue, subsidy, service quality, service level, and safety. It was not written with volunteer systems in mind, however, and presupposes a high level of technical personnel to perform the evaluations. It presupposes a great deal of bookkeeping information available.

30) PHOTOGRAPHIC MEDIA CENTER, UNIVERSITY OF WISCONSIN, "People who Need People: Passenger Assistance Techniques," a multi-image media presentation of programs designed for training drivers. Available from Slide Tape Production Sales, Photographic Media Center, 45 North Charter Street, Madison, Wisconsin 53715 at cost.

31) "REVENUE ENHANCEMENT AND SOURCES: IMPORTANT RECENT CHANGES IN FEDERAL HUMAN SERVICE FUNDING." (no author) in U.S. Department of Transportation, The Sixth National Conference on Rural Public Transportation, Final Report. November 1983. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 85-114668, Price Code A13/A01.

32) RICE CENTER, A Guide to Innovative Financing Mechanisms for Mass Transportation, Revised Edition, December 1985. Prepared by Rice Center, Nine Greenway Plaza, Suite 1900, Houston, Texas 77046, for the Office of Budget and Policy, Urban Mass Transportation Administration, USDOT, Washington, D.C. 20590. Report is available from the U.S. Department of Transportation's Technology Sharing Program (I-30), Room 9402, Nassif Building, 400 Seventh Street, S.W., Washington, D. C. 20590 while supplies last.

33) RURAL AMERICA, "Getting There: Making Rural Transportation Work," Rural America, Vol. 8, No. 4, July-August 1983.

The entire issues is devoted to rural transportation.

34) RURAL AMERICA, Preliminary Directory of Section 18 Recipients and Operators by State, June 1983. Available from Rural America, Cooperative Transportation Project, 1312 18th. Street N.W., Washington, D.C. 20036 at cost.

35) RURAL AMERICA, Rural Transportation Reporter.

This periodical is available from Rural America, Cooperative Transportation Project, 1312 18th Street N.W., Washington, D.C. 20036. Useful for current issues. It lists state coordinators and other helpful lists of "who's who in rural transportation" as well as good articles on current programs, public policy issues and techniques. Subscriptions are $33.75 per year.

36) SIMMONS, Patrick B. and Kathleen EVERS, "Developing Sources of Local Funding: The Experiences of Two North Carolina Communities," in Financing State and Local Transportation, Transportation Research Record Number 1009. Available from the Transportation Research Board, National Research Council, 2101 Constitution Avenue N.W., Washington, D.C. 20418 at cost.

37) STEPHANEDES, Yorgos and David M. EAGLE, "Job Search Trip Distribution in Rural Areas," Journal of Advanced Transportation, 1983, Vol. 17:2, 183-199.

A technical discussion using advanced mathematics. Interesting for professional planners.

38) SUHRBIER, John H. and Frederick A. WAGNER, Van Pool Research: State of-the-Art Review. Available to the public through the National Technical Information Service, Springfield, Virginia 22161 at cost.

39) TEAL, Roger F. et. al., Shared Ride Taxi Services as Community Public Transit. March 1980. Prepared by the Institute of Transportation Studies, School of Social Sciences, University of California, Irvine, California 92717, for the U.S. Department of Transportation Urban Mass Transportation Administration. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 80-226475, Price Code A11/A01.

This is a helpful review of SRT practice in California. The uniqueness of funding, labor conditions, and population density may limit its power to offer guidance to rural areas in other parts of the country. The report is very well written and offers important detail on the functioning of SRT.

40) -----. Taxi-Based Special Transit Services, Final Report, March 1983. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. 84-101625, Price Code A07/A01.

41) TICE, Robert K. and Robert P. FAIN, "Volunteers in a Rural Specialized Transportation Program: the OATS' Experience," Specialized Transportation Planning and Practice, 1983, Vol. 1, 225-235. Discusses the techniques for financing and recruiting volunteers into the very successful OATS program. A useful case study.

42) TRANSPORTATION ACCOUNTING CONSORTIUM, A Model Standard Chart of Accounts for Rural and Specialized Transportation Providers. This report is available from Ken Malkowski, Transportation Accounting Consortium, P. O. Box 30037, 300 Capitol Avenue, Lansing, MI. 48909.

This manual presents a transportation model chart of accounts, and defines revenues and expense items for day-to-day use. It also discusses assets, liabilities, and capital accounts. It is very useful for interagency accounting, where complicated transactions are necessary.

43) TRANSPORTATION ACCOUNTING CONSORTIUM, Simplifying Human Service Transportation and Small Transit System Accounting: A Six State Perspective. This report is available from Ken Malkowski, Transportation Accounting Consortium, P. O. Box 30037, 300 Capitol Avenue, Lansing, MI 48909.

This report describes the issues involved in interagency financial transactions in six states. It discusses state implementation of human service transportation billing, and state mechanisms for improving the cash flow to transportation providers. It is very useful for interagency accounting, where complicated transactions are necessary.

44) U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Office of Human Development Services. Project Respond, Fayetteville, Arkansas, Two Year Demonstration Report, March 1980. USDHHS, OHDS, Washington, D.C. 20201. Report prepared by Community Resource Group, Inc. Fayetteville, Arkansas.

Entries 44-46 are part of a series of reports on experiments in coordinated transportation funded by the Office of Human Development Services. After a few months of operation, the consolidated transportation system described in this report was already providing ten percent increased service levels, with a nine percent drop in cast outlays, despite inflation and rising fuel costs. Reference 4 is the summary report for this series.

45) U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Office of Human Development Services. RIDE Jacksonville, Florida, Two Year Demonstration Report, March 1980. USDHHS, OHDS, Washington, D. C. 20201. Report prepared by Northeast Florida Community Action Agency, Inc. Jacksonville, FA.

46) U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Office of Human Development Services. WCTP, Westchester, New York, Final Demonstration Report, March 1980. USDHHS, OHDS, Washington, D. C. 20201. Report prepared by Margorie C. Michaelson, Project Director, Westchester Coordinated Transportation Project, White Plains, New York.

47) U.S. DEPARTMENT OF TRANSPORTATION, Bus Route Costing Procedures: A Review. May 1981. Prepared by Simpson & Curtin Division, Booz, Allen & Hamilton, Inc. Philadelphia, PA. Report is available from the U.S. Department of Transportation's Technology Sharing Program (I-30), Room 9402 Nassif Building, 400 Seventh Street S.W., Washington, D. C. 20590 while supplies last.

48) USDOT. Federal Highway Administration. Public Transportation for Rural and Small Urban Areas: A Report on Coordination in 12 Selected Section 18 Projects. November 1982. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 83-180596 at cost.

Gives helpful case examples of rural systems which have received Section 18 funds. In many states, however, the Section 18 funds are not available to new starts because they have been previously committed, because the state regulations prevent their use for client-oriented transportation. Generalizations to volunteer systems, therefore, must proceed with caution.

49) USDOT. Office of the Secretary of Transportation. Transit Works: 10 Rural Case Studies. June 1982. Report prepared by The Institute for Urban Transportation, School of Business, Indiana University, Bloomington, Indiana. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 85-102531, Price Code A05/A01.

The report gives good case material on ten systems with considerable amounts of federal funding. With the exception of OATS, most did not use significant numbers of volunteers. The data are useful for comparative purposes.

50) USDOT. Urban Mass Transportation Administration. Paratransit in Rural Areas. Report prepared by Multisystems, 1050 Massachusetts Avenue, Cambridge, MA. 02138. Report is available from the National Technical Information Service, Springfield, Va. 22161. Order No. PB 83-163618, Price Code A04/A01.

51) USDOT. Urban Mass Transportation Administration. Paratransit Services for the Transportation Handicapped. Report prepared by Multisystems, 1050 Massachusetts Avenue, Cambridge, MA. 02138. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 83-169649. Price Code A06/A01.

This report contains some useful case studies, and statistical data on a large number of paratransit systems designed to provide service to the handicapped. Operators may be interested to compare their own operating data to that of these systems.

52) USDOT. Urban Mass Transportation Administration. Saving on Bus Insurance in Wisconsin: Joint Vehicle Insurance Program Implementation. Prepared by Warren, McVeigh & Griffin, Inc. 1420 Bristol Street North, Suite 220, Newport Beach, California 92660. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 84-213768, Price Code A05/A01.

The report describes the Wisconsin Municipal Transit Insurance Commission, which provides vehicle insurance programs for 14 Wisconsin municipal transit systems, thereby saving about $275,000, or 47% over the cost of their expiring programs. Applications to rural, volunteer based systems must be inferred.

53) USDOT. Urban Mass Transportation Administration. Transit Service and Organizational Alternatives for a Low Density Suburban-Rural Area: A Study of Public Transit Options for Albemarle, County, Virginia. Prepared by the Department of Civil Engineering, University of Virginia for the University Research and Training Program, Urban Mass Transportation Administration. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 299-475 at cost.

This report reviews organizational arrangements for public and private approaches to rural transportation. It is somewhat outdated, given changes in funded programs. The reader may be interested in the alternative organization charts presented.

54) USDOT. Urban Mass Transportation Administration. Use of Volunteers in the Transportation of Elderly and Handicapped Persons. Prepared by Del Green Associates for the Office of Technical Assistance, UMTA. January 1984. Report is available from the U.S. Department of Transportation's Technology Sharing Program (I-30), Room 9402 Nassif Building, 400 Seventh Street S.W., Washington, D.C. 20590 while supplies last.

This report describes characteristics of current volunteer programs for specialized clientele, the elderly and handicapped. It dsecribes the characteristics of the riders, and the programs. It offers recommendations on ways which the private sector can be of greater assistance to volunteer transportation programs. It reviews the following volunteer programs: City of Huntsville; Voluntary Action Center of Montgomery, Alabama; American Red Cross, Phoenix, Arizona; Volunteer

Bureau of Marin County, California, and many more. It offers a good selection of forms, advertising examples, and other "nuts and bolts" information.

55) U.S. DEPARTMENT OF TRANSPORTATION AND U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES. The Transportation Accounting Consortium: A Six-State Analysis of Accounting and Reporting Practices for Human Services Transportation. Vol. 1. Final Report, March 1982. Report prepared by Carter-Goble Associates, Inc. with Applied Resource Integration, Ltd. Report is available from the U.S. Department of Transportation's Technology Sharing Program (I-30) Room 9402 Nassif Building, 400 Seventh Street S.W., Washington, D.C. 20590 while supplies last.

This is an extremely useful guide to transportation accounting, but applicable only where the complexities of interagency funding dictate a professional approach. Simple, volunteer-based programs may escape the need to account for and report complicated cash reimbursement, by virtue of having donated resources.

56) WALTHER, Erskine S. State and Local Financing of Public Transit. Prepared by the Transportation Institute, North Carolina Agricultural and Technical State University, Greensboro, N.C. 27411 for the University Research and Training Program, Urban Mass Transportation Administration, U.S. Department of Transportation. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 83-261065, Price Code A10/A01.

A thorough review of non-federal funding, but primarily discussing large urban systems.

57) WILLIAMS, Margaret and Stockton CLARK, "Something Funny Happened on the Way to Coordination....," a paper prepared for the First AOA & UMTA National Conference on Transportation for the Elderly and Handicapped, Orlando, Florida, October 24-27, 1984.

The paper describes the growing pains of one New York county's experience in trying to establish a coordinated system of transportation using UMTA 16(b) (2) vehicles, Section 18 funds, and local agency resources. The lessons may not be generalizable.

58) YOUNG, Terry A. "Driver Selection in the Rural Transit Industry: A Risk Management Perspective," in U.S. Department of Transportation, The Sixth National Conference on Rural Public Transportation, Final Report, November 1983. Report is available from the National Technical Information Service, Springfield, VA. 22161. Order No. PB 85-114668, Price Code A13/A01.

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